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IS 10834 (1984): Specification for Maize Maida [FAD 16: Foodgrains, Starches and Ready to Eat Foods]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard
SPECIFICATION FOR
MAIZE MAIDA

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR MAIZE MAIDA

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Indian Standard

SPECIFICATION FOR MAIZE *MAIDA*

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 January 1984, after the draft finalized by the Foodgrains and Foodgrain Industries Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Maize *MAIDA* or *MAKKI KA MAIDA* is a comparatively new product gaining popularity with the consumers. It is expected that the formulation of an Indian Standard on this product would facilitate the availability of maize *MAIDA* of known quality.

0.2.1 Maize *MAIDA* is manufactured from maize grain after cleaning, removal of germ (embryo), bran and tipcap to the maximum possible extent and milling to the desired granularity.

0.3 In the formulation of this standard due consideration has been given to the *Prevention of Food Adulteration Act, 1954*, and Rules framed thereunder. Due consideration has also been given to the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977*. However, this standard is subject to restrictions imposed under these rules, wherever applicable.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for maize *MAIDA*.

2. REQUIREMENTS

2.1 Description — The material shall be obtained from sound and clean

*Rules for rounding off numerical values (*revised*).

maize of the yellow or white variety. It shall have a typical colour (yellow or white), taste and flavour of the variety of maize. It shall be free from musty or other off odour, insect or fungus infestation, rodent contamination, adulterants and extraneous matter.

NOTE—The appearance, taste and odour shall be determined by organoleptic tests.

2.2 The material shall be manufactured in premises maintained under hygienic conditions (see IS : 2491 - 1972*).

2.3 Microscopic Appearance of Starch — When the finely powdered materials is subjected to microscopic examination, the starch granules shall have a characteristic appearance as shown in the photomicrograph reproduced in Fig. 1, revealing uniform polygonal shape. The hilum is fairly marked and is starred with fissures, but no striae are observed. Distinct polarized crosses are seen.

2.4 Maize *MAIDA* shall also comply with the requirements given in Table 1.

TABLE 1 REQUIREMENTS FOR MAIZE *MAIDA*

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST, REF TO	
			Appendix of IS : 1155-1968*	Other Standards
(1)	(2)	(3)	(4)	(5)
i)	Moisture, percent by mass, <i>Max</i>	13.0	A	—
ii)	Total ash (on dry basis), percent by mass, <i>Max</i>	1.0	B	—
iii)	Acid insoluble ash (on dry basis), percent by mass, <i>Max</i>	0.1	C	—
iv)	Alcoholic acidity (as H_2SO_4) with 90 percent alcohol, percent by mass, <i>Max</i>	0.30	F	—
v)	Crude fibre (on dry basis), percent by mass, <i>Max</i>	1.0	E	—
vi)	Protein (on dry basis), percent by mass, <i>Min</i>	7.0	—	IS : 7219-1973†
vii)	Granularity	To satisfy the test	—	Appendix A of this Standard

*Specification for wheat *ATTA* (second revision).

†Method for determination of protein in foods and feeds.

*Code for hygienic conditions for processing units (first revision).

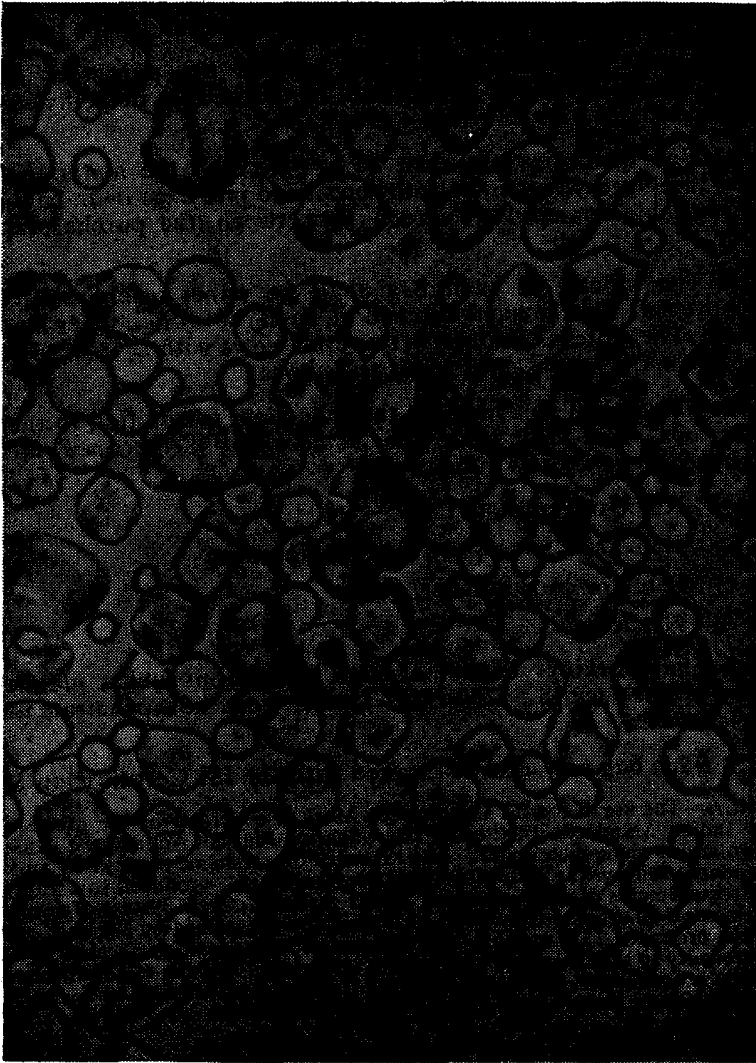


FIG. 1 PHOTOMICROGRAPH OF MAIZE STARCH ($\times 700$)

3. PACKING AND MARKING

3.1 Packing — The packages may preferably be of 1 kg, 2 kg, 10 kg, 20 kg, 35 kg, 40 kg, 75 kg, 85 kg and 90 kg as desired by the purchaser.

3.1.1 Unless otherwise agreed to between the purchaser and the vendor quantities above 65 kg shall be packed in polyethylene lined A-twill jute bags (*see* IS : 1943 - 1964*).

3.1.2 For quantities less than 65 kg (*see* 3.1) the material shall be packed in polyethylene or polyethylene lined jute bags or in bags of any other suitable material as agreed to between the purchaser and the vendor.

3.1.3 The mouth of each bag shall be either machine-stitched or hand-stitched. If it is hand-stitched it shall be rolled over and then stitched. The stitches shall be in two cross rows with at least 14 stitches in each row for jute bags of 65 kg and above.

3.2 Each bag shall bear legibly the following, in addition to the information as is necessary under the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977* :

- a) Name of the material,
- b) Name and address of the manufacturer,
- c) Batch or code number, and
- d) Net mass.

3.2.1 The markings of the bag shall be done in such a manner that the dye or ink (*see* IS : 1234-1980†) used, does not penetrate into the material.

3.2.2 Each bag may also be marked with the ISI Certification Mark.

NOTE—The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

*Specification for A-twill jute bags (*revised*).

†Specification for ink, stencil, oil base, for marking porous surfaces. (*first revision*).

4. SAMPLING

4.1 Representative samples of the material shall be drawn according to the procedure given in IS : 5315-1978*.

4.2 Number of Tests and Criteria for Conformity

4.2.1 All the characteristics given in this specification shall be tested on the composite sample.

4.2.2 The lot shall be declared as conforming to the requirements of this specification if all the test results on the composite sample meet the corresponding specification requirements.

5. TESTS

5.1 Tests shall be carried out as prescribed under 2.3 and the appropriate appendices and Indian Standard referred to in col 4 and 5 of Table 1.

5.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070 - 1977†) shall be used in tests.

NOTE — Pure chemical shall means chemicals that do not contains impurities which affect the results or analysis.

APPENDIX A

(Table 1, Item vii)

DETERMINATION OF GRANULARITY

A-1. PROCEDURE

A-1.1 Transfer about 10 g of the material to 355-micron IS Sieve [*see* IS : 460 (Part 1)-1978‡], and sieve for two minutes. Brush the upper surface of the sieve and sieve again for one minute. The material shall be deemed to have satisfied the requirement of the test, if no residue is left on the sieve.

*Methods of sampling for milled cereals and pulses products (*first revision*).

Specification for water for general laboratory use (*second revision*).

Specification for test sieves : Part I wire cloth test sieves (*second revision*).

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